

ROCKFORD BAY SUMMER HOMES (PWSNO 1280158) SOURCE WATER ASSESSMENT REPORT

January 9, 2001



State of Idaho Department of Environmental Quality

Disclaimer: This publication has been developed as part of an informational service for the source water assessments of public water systems in Idaho and is based on data available at the time and the professional judgement of the staff. Although reasonable efforts have been made to present accurate information, no guarantees, including expressed or implied warranties of any kind, are made with respect to this publication by the State of Idaho or any of its agencies, employees, or agents, who also assume no legal responsibility for the accuracy of presentations, comments, or other information in this publication. The assessment is subject to modification if new data is produced.

Source Water Assessment for Rockford Bay Summer Homes

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for Rockford Bay Summer Homes*, describes the public drinking water system, potential contaminant sources identified within a 1000-foot boundary around the drinking water source, and the susceptibility (risk) that may be associated with any potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and is not intended to undermine the confidence in your water system.**

The Rockford Bay Summer Homes drinking water source is a 160-foot deep well. The water system serves 20 homes located on the north side of Rockford Bay on Lake Coeur d'Alene. Rockford Bay Summer Homes water is tested quarterly for microbial contamination and yearly for nitrates. Total coliform were present in samples tested in February and March 1996, in January and February 1998, and a single sample tested in January 1999. Nitrates have been detected every year since 1995 in concentrations ranging between 0.046 mg/l and 0.094 mg/l. The Maximum Contaminant Level (MCL) for Nitrate is 10.0 mg/l.

A susceptibility analysis DEQ conducted December 5, 2000 ranked the risk of microbial contamination high based on water testing results and the density of septic systems near the well (see the accompanying map). The susceptibility to inorganic chemical contamination is also high. Vulnerability to synthetic organic chemical and volatile organic chemical contamination ranked in the moderate range due to system construction and hydrologic sensitivity scores which are usually determined from the well log for the public water system. No well log is on file for Rockford Bay Homes and scoring is conservative when information is lacking.

A copy of the susceptibility analysis for your system along with a map showing any potential contaminant sources is included with this summary. Information regarding the potential contaminants within the 1000-foot boundary have is summarized in Table 1.

Table 1. Rockford Bay Summer Homes Contaminant Inventory

Map	Site Description	Potential Contaminants	Source of Information
1	Septic Tank	Microbial, Nitrate (IOC)	Enhanced Inventory
2	Septic Tank	Microbial, Nitrate (IOC)	Enhanced Inventory
3	Drainfield	Microbial, Nitrate (IOC)	Enhanced Inventory
4	Private Sewer System	Microbial, Nitrate (IOC)	Enhanced Inventory
5	Septic Tank And Drainfield	Microbial, Nitrate (IOC)	Enhanced Inventory
6	Septic Tank	Microbial, Nitrate (IOC)	Enhanced Inventory
7	Septic Tank	Microbial, Nitrate (IOC)	Enhanced Inventory
8	Holding Tank Only	Microbial, Nitrate (IOC)	Enhanced Inventory
9	Septic Tank	Microbial, Nitrate (IOC)	Enhanced Inventory
10	Septic Tank And Drainfield	Microbial, Nitrate (IOC)	Enhanced Inventory
11	Septic Tank	Microbial, Nitrate (IOC)	Enhanced Inventory
12	Septic Tank And Drainfield	Microbial, Nitrate (IOC)	Enhanced Inventory
13	Septic Tank	Microbial, Nitrate (IOC)	Enhanced Inventory
14	1200 Gallon Holding Tank And 250gallon Septic Tank	Microbial, Nitrate (IOC)	Enhanced Inventory

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

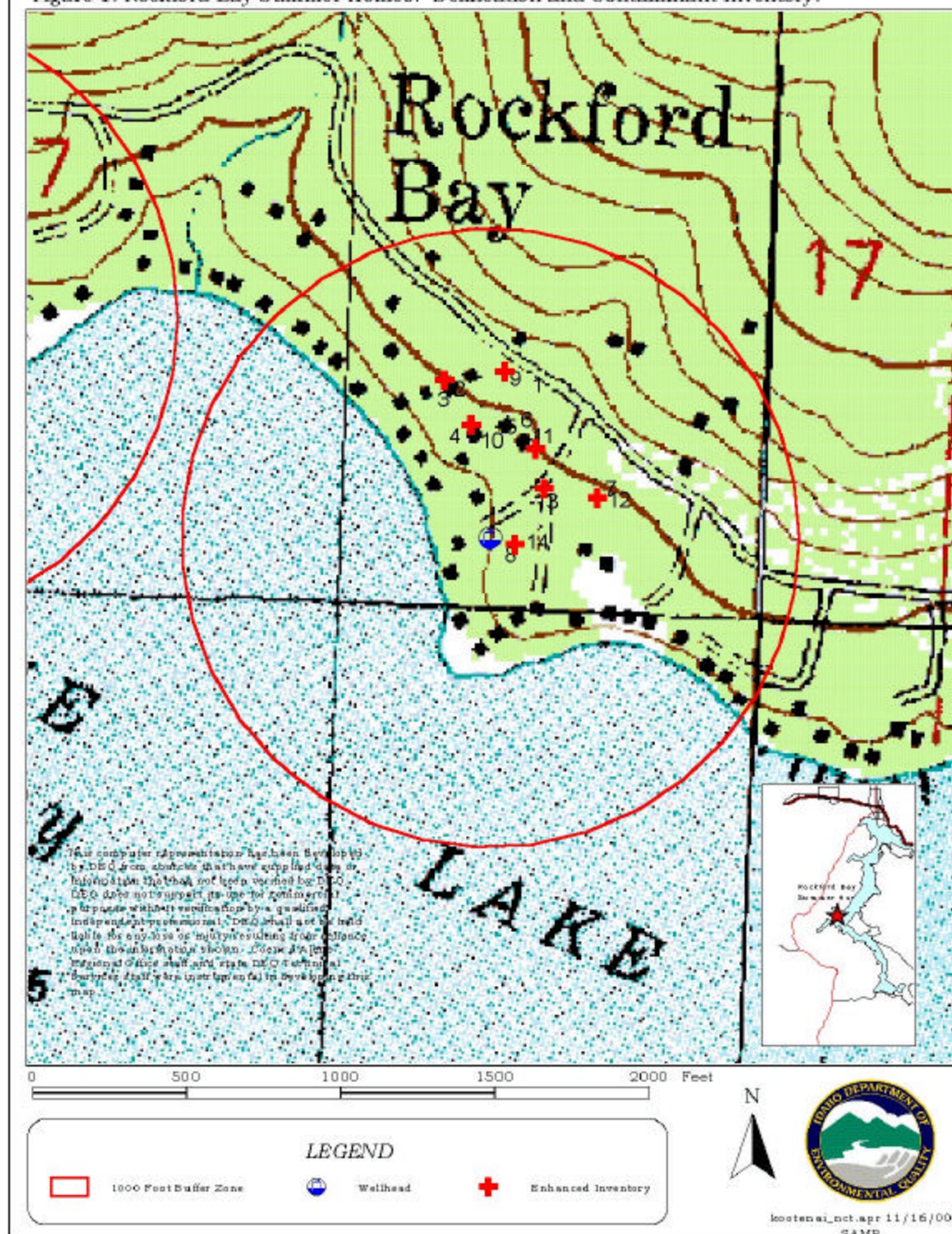
Source water protection activities for Rockford Bay Summer Homes should focus first on maintaining the 50-foot radius around well as an open space free of herbicides, pesticides and fertilizers, parked vehicles and so on. It may be useful to put up signs or a fence to identify the boundaries of the well lot. The association should institute public education and information programs for its members aimed at reducing risks to the water supply from improperly used or stored yard and household chemicals. Given the number of lots within 1000 feet of the well, septic system maintenance is another important topic for public information efforts. Source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing source water protection strategies please contact Tony Davis at the Coeur d'Alene Regional DEQ office at 208 769-1422.

DEQ website:

<http://www.deq.state.id.us>

Figure 1. Rockford Bay Summer Homes. Delineation and Contaminant Inventory.



Ground Water Susceptibility Report

Public Water System Name : **ROCKFORD BAY SUMMER HOMES**

Well# :

WELL #1

Public Water System Number : **1280158**

12/5/00 2:50:43 PM

1. System Construction		SCORE			
Drill Date	1975				
Driller Log Available	NO				
Sanitary Survey (if yes, indicate date of last survey)	YES	1997			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		4			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		6			
3. Potential Contaminant / Land Use - ZONE 1A Sanitary Setback)		IOC	VOC	SOC	Microbial
		Score	Score	Score	Score
Land Use Zone 1A	RANGELAND, WOODLAND, BASALT	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	Yes
Total Potential Contaminant Source/Land Use Score - Zone 1A		0	0	0	0
Potential Contaminant / Land Use - ZONE 1B (100 foot radius)					
Contaminant sources present (Number of Sources)	YES	14	0	0	14
(Score = # Sources X 2) 8 Points Maximum		8	0	0	8
Sources of Class II or III leacheable contaminants or Microbials	YES	14	0	0	
4 Points Maximum		4	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		12	0	0	8
Cumulative Potential Contaminant / Land Use Score		12	0	0	8
4. Final Susceptibility Source Score		13	10	10	13
5. Final Well Ranking		Moderate	Moderate	Moderate	High*

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Scoring:

- 0 - 5 Low Susceptibility
- 6 - 12 Moderate Susceptibility
- > 13 High Susceptibility.

POTENTIAL CONTAMINANT INVENTORY

LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as **Superfund** is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100-year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.